

SECRET

Approved For Release 2004/05/05 : CIA-RDP78B05171A000600010083-2

NPIC/TSSG/RED/SDB-016-70
17 March 1970

MEMORANDUM FOR THE RECORD

SUBJECT: HPSC Calibration Device

1. On 17 March 1970, [] was contacted via TeleCon for discussions on questions concerning the proposal on the Calibration Device for the HPSC. The questions posed and answers given to them are as follows:

25X1

a. Q--Is there any problem with including "aperiodic" ticks on the NBS certified scales?

A--No problem. Suggest aperiodic markings at each end of the scale.

b. Q--To what extent have you considered low comparator light levels with using a half silvered mirror for splitting the image in the eyepiece attachment?

A--Do not anticipate any problem with the high light level of the HPSC. However, there probably would be a problem with other comparators. Am looking at technique for slipping mirror out of the way for this application.

c. Q--How limited is the range of magnification change with the slit width of the planned eyepiece attachment?

A--The breadboard has been tested through a range of 10X-200X (the range of the HPSC) with no problems. The 40 diameter magnification appears to be optimum with the present set up, but there is nothing sacred about this magnification.

d. Q--What is your estimate of the weight of the eyepiece attachment?

A--The weight of the miniaturized module is estimated at less than 6oz. The size should be less than 2x2x3 inches. This can be attached to some of the more sensitive comparators by brackets.

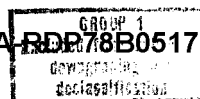
e. Q--Why not make all of the scales on 1/16" thick substrates?

A--No problem. All scales will be on a 1/16" base. A little care in using them is all that is necessary.

Declass Review by NIMA/DOD

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f. Q--Would it be possible to mark the null meter in one tenth micrometer increments for use on less sensitive comparators?

A--Would not recommend this approach to the problem. Suggest changing the sensitivity of the null meter to suit the particular comparator movement sensitivity. This would achieve the same end.

g. Q--Drawings of the final prototype calibrator have been requested by operating personnel. Can these be included as a deliverable item.

A--Yes. They will be available for the final prototype device. However, only crude sketches will be made for the Experimental Device.


Project Monitor
HPIC/TSSG/RED/SDB

25X1

Distribution:

Original - Route & File
1 - SDB Chrono
1 - File

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